

ABSTRACT

The present invention provides methods to detect biomolecules on a microarray using a scanning electron microscope. In one embodiment of the invention, errors in 5 oligonucleotide synthesis during manufacturing of microarrays are detected by monitoring synthesis of control probes on the chips. In another embodiment, misalignment of features on the chip is determined. In yet another embodiment, the size, shape and edge definition of features on the chip is determined. In further embodiments, methods are provided for analyzing interactions between an oligonucleotide target and an 10 oligonucleotide probe on a microarray and methods for testing conditions in a microarray manufacturing process.